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EXAMINER	
TIMBLIN, ROBERT M	

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2167	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/706,617	WADA, SHINYA	
	Examiner	Art Unit	
	ROBERT TIMBLIN	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16, 20-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 20-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action corresponds to application 10/706,617 filed 11/12/2003.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/12/2009 has been entered.

Response to Amendment

Claims 1, 10, 12, 14, and 20-25 have been amended 9/24/2008. Accordingly, claims 1-16 and 20-27 are pending in this application.

Claim Objections

The previous claim objections have been withdrawn in light of the amendments.

However, in further examination, claim 22 is objected to because the last clause of the claim should recite "the temporary display position" rather than "the temporary display positions" to avoid antecedent basis issues.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-6, 9, 10, 12-14, 16, and 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. (Aoki) (U.S. Patent 6,253,218) in view of Brosnan et al. (Brosnan hereafter) U.S. Patent Application 2004/0002380.

With respect to claim 1, Aoki teaches in at least embodiment 1 (starting line 30 of column 8 and figures 1-13) a file processing apparatus comprising a computer processor, said file processing apparatus including:

an attribute input unit (102) which acquires a value of an attribute (col. 2 line 45) for at least one file (col. 2 line 10) in order to represent a value of a predetermined attribute for an intended file (as a data characteristics detecting section 102 that corresponds to the attribute input unit col. 8 lines 46-50 and figure 1, 108) as a weight (col. 20 line 30-67; i.e. judging density suggests a weight as well as col. 9 line 42-45 wherein placement according to characteristics represents a weight) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

a comparison processing unit (judging section 43) operative using the computer process (col. 8 line 58) to compare the value of the attribute with a reference value (as data

characteristics detecting section extracts attribute values of data from database, such as the date of creation and the data model generating section generates a 3-D data model according to the extracted attribute values of the data. The data model placing section calculates a display position of the 3-D data model on the 3-D coordinate space and 3-D data model set at a position, which visually represents the attribute such as the data of generation of the data (embodiment 1, column 9). By these teachings, a comparison had to have been made of the date of creation of the data with the date represented by the original point in the 3-D space for determining the display position)).

a position determining unit (106) operative using the computer processor to set a relative display position of a predetermined object (col. 20 line 43 and at least figures 46-47) that represents the weight (i.e. density) of the attribute, wherein the relative display position is set based on a result obtained from said comparison processing unit (judging section 43).

a display processing unit (107) which represents the value of the attribute (col. 2 line 45) for visual display in terms of whether the weight of the predetermined object is heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items), wherein the display position of the predetermined object is set by said position determining unit (as the display section outputs the placing result; col. 9 lines 23-25), and

the relative display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction(figure

2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

Aoki fails to explicitly teach wherein the display position indicates that a virtual force is exerted on the object at least in one direction.

Brosnan, however, teaches the display position indicates that a virtual force is exerted on the object at least in one direction (0073 and 0130) for simulating the display of objects on a screen as determined by their properties (see also Brosnan, 0138).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16). Further, the virtual force used in Brosnan would have enabled a user of Aoki to understand the characteristics of each data item in a relationship among the data.

With respect to claim 3, Aoki teaches a file processing apparatus according to claim 1, wherein said attribute input unit acquires values of the attribute for a plurality of files (detecting data), said comparison processing unit sets a value of an attribute for at least one of the plurality of files to the reference value, said position determining unit sets relative display positions of a plurality of objects corresponding to the plurality of files, respectively, and wherein said display

processing unit displays the plurality of files at the respective display positions and visually represents the comparison of weights of the files via another object representative of the measurement of the weights (col. 9, lines 1-10 and figures 1-2) Therein data characteristics and data attributes are detected. After, a 3-D data model is determined by the obtained information.

With respect to claim 4, Aoki teaches a file processing apparatus according to claim 3 wherein said comparison processing unit sets, as the reference value, a size of a storage area that stores at least one file, said position determining unit sets a relative display position of an object indicative of the storage area according to the size of the storage area, and wherein said display processing unit visually expresses the comparison of data size between the at least one file and the storage area via the another object. As seen in embodiment 1 starting in column 8 and specifically in col. 9 lines 5-15 as a display pattern is based upon data characteristics which correlate to reference values.

With respect to claim 5, Aoki teaches a file processing apparatus according to claim 1, wherein said attribute input unit acquires values of an attribute for a plurality of files and said comparison processing unit classifies the plurality of files into a plurality of groups according to the respective values of the attribute, and wherein said display processing unit displays the object in an appearance corresponding to the respective groups as categories (col. 9 line 20).

With respect to claim 6, Aoki teaches a file processing apparatus according to claim 1, wherein said attribute input unit acquires values of an attribute for a plurality of files (col. 9 lines

5-10), said comparison processing unit classifies the plurality of files into a plurality of classes and sequentially compares the values of an attribute for each class (col. 9 line 20), wherein, after relative display positions are temporarily determined respectively as positions that initially display objects for the plurality of files (figure 2), said position determining unit sequentially updates the relative display positions in a manner such that comparison results for each class are reflected for each class, and wherein said display processing unit varies the display of the objects according to said updating after the plurality of files are displayed at the temporally determined relative display positions (taught at least by embodiment 15 in column 26 and figure 83).

With respect to claim 9, Aoki teaches a file processing apparatus according to claim 1 further including:

an instruction receiving unit which receive an instruction from a user intending to change the display (abstract and col. 3 line 8-10; i.e. a user directing change) position of the object as an input section (108 of figure 1); and

an effect generator (figure 13) which causes, based on the instruction, said position determining unit and said display processing unit to process a change in any of position, shape and appearance of the object (as a viewpoint changing section 109 of figure 1).

With respect to claim 10 Aoki teaches a method of processing files, including:

setting a relative display position of a predetermined object that symbolically represents the files in terms of whether the weight thereof is heavy or light (col. 20 line 67; i.e. density suggests a concept of heavy/light weight), based on a value of a predetermined attribute for an

intended file, in order to represent the value of a predetermined attribute therefor by using a concept of weight (col. 9 lines 15-20) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format); and

representing visually the weight by displaying the object at the relative display position on a screen (col. 9 lines 23-25)

the relative display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction (figure 2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

Aoki fails to explicitly teach the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction.

Brosnan, however, teaches the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction (0073 and 0130) for simulating the display of objects on a screen as determined by their properties (see also Brosnan, 0138).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the

time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 12, Aoki teaches A method of processing files, including:

acquiring values (102; i.e. detecting data characteristics) of a predetermined attribute (col. 2 line 45) for a plurality, of intended files (col. 2 line 10) in order to represent the values of a predetermined attribute therefor by using a concept of weight (i.e. density; col. 20) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

setting (108), for each of the plurality of files (col. 2 line 10), a relative display position of a predetermined object that represents symbolically the files (col. 3 line 5-10, and at least figures 1, 2, and 46-47) in terms of whether the weight thereof is heavy or light (i.e. density, col. 20 line 30-67), based on the values of a predetermined attribute (col. 2 line 45); and

displaying the objects of the plurality of files at the respective display positions on a screen (drawing reference 107), and expressing visually comparison of the weights of the objects via another object that symbolizes weight measurement (figures 44-47; i.e. denser objects are represented deeper on the z-axis), wherein

the relative display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction(figure 2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

Aoki fails to explicitly teach the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction.

Brosnan, however, teaches the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction (0073 and 0130) for simulating the display of objects on a screen as determined by their properties (see also Brosnan, 0138).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 13, Aoki teaches a method of processing files according to claim 12, wherein said acquiring further acquires a size of a storage area that stores at least one file

(col. 9 lines 5-10), and said setting sets the relative display position of at least one object corresponding to the at least one file, based on a comparison result obtained by comparing a data size between the at least one object and the storage area (embodiment 1, column 9), and wherein said displaying and expressing represents visually the comparison result via the another object (display section 107).

With respect to claim 14, Aoki teaches a method of processing files, including:

acquiring values of a predetermined attribute for a plurality of files, in order to represent the values of a predetermined attribute for intended files (col. 8 lines 46-50 and figure 1, 108, 102) by using a concept of weight (col. 20 line 30-67; i.e. judging density suggests a weight as well as col. 9 line 42-45 wherein placement according to characteristics represents a weight) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

setting a temporary sequence for the plurality of files (figure 2 and col. 9 lines 1-20; 3-D model);

determining, based on the temporary sequence (figure 2), a temporary display position of a predetermined object (figures 44-47) that symbolically represents the files in terms of whether the weight thereof is heavy or light (i.e. density, col. 20);

displaying an object that corresponds to the plurality of files (col. 2 line 10), at the temporary display position on a screen (figure 2, 202, 203);

comparing the values of a predetermined attribute between adjacent files in the temporary sequence (embodiment 1, column 9);

updating the display position based on a comparison result obtained from said comparing (col.34 lines 9-20); and

representing visually the weight thereof by varying display contents according to said updating (as a display pattern determined based on size; col. 9 lines 8-10), wherein

the temporary display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction(figure 2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

Aoki fails to explicitly teach the temporary display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction.

Brosnan, however, teaches the temporary display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction (0073 and 0130) for simulating the display of objects on a screen as determined by their properties (see also Brosnan, 0138).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the

time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 16, Aoki teaches a method of processing files according to claim 10, further including: acquiring an instruction from a user who intends to cause a display position of the object to be changed; and changing at least one of position, shape and appearance of the object, based on the instruction. This limitation is taught by Aoki wherein a user inputs a command for changing the view by means of the input section (embodiment 1, column 9).

With respect to claim 20, Aoki teaches A computer-readable recording medium which stores a program executable by a computer, the program including the functions of:

setting a relative display position (fig. 47) of a predetermined object (drawing reference 208) that symbolically represents the files (e.g. files in figure 47) in terms of whether the weight thereof is heavy or light (i.e. density, suggesting weight; col. 20, lines 24-65), based on a value of a predetermined attribute for an intended file (figure 2, drawing reference 202), in order to represent the value of a predetermined attribute therefor by using a concept of weight (col. 20 line 30-67; i.e. judging density suggests a weight as well as col. 9 line 42-45 wherein placement according to characteristics represents a weight) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set

by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format); and

representing visually (drawing reference 208) the weight by displaying the object at the relative display position on a screen (col. 20 lines 30-46; i.e. Aoki discloses placing data in subspaces according to density).

Aoki fails to explicitly teach the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction.

Brosnan, however, teaches the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction (0073 and 0130) for simulating the display of objects on a screen as determined by their properties (see also Brosnan, 0138)

the relative display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction(figure 2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data

items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 21, Aoki teaches A computer-readable recording medium which stores a program executable by a computer, the program including the functions:

acquiring values (102; i.e. detecting data characteristics) of a predetermined attribute (col. 2 line 45) for a plurality, of intended files (col. 2 line 10) in order to represent the values of a predetermined attribute therefor by using a concept of weight (col. 20 line 30-67; i.e. judging density suggests a weight as well as col. 9 line 42-45 wherein placement according to characteristics represents a weight) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

setting (108), for each of the plurality of files (col. 2 line 10), a relative display position of a predetermined object that represents symbolically the files (col. 3 line 5-10, and at least figures 1, 2, and 46-47) in terms of whether the weight thereof is heavy or light (i.e. density, col. 20 line 30-67), based on the values of a predetermined attribute (col. 2 line 45); and

displaying the objects of the plurality of files at the respective display positions on a screen (drawing reference 107), and expressing visually comparison of the weights of the objects

via another object that symbolizes weight measurement (figures 44-47; i.e. denser objects are represented deeper on the z-axis), wherein

the relative display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction(figure 2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

Aoki fails to explicitly teach the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction.

Brosnan, however, teaches the relative display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction (0073 and 0130) for simulating the display of objects on a screen as determined by their properties (see also Brosnan, 0138).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 22, Aoki teaches A computer-readable recording medium which stores a program executable by a computer, the program including the functions of:

acquiring values of a predetermined attribute for a plurality of files, in order to represent the values of a predetermined attribute for intended files (col. 8 lines 46-50 and figure 1, 108, 102) by using a concept of weight (col. 20 line 30-67; i.e. judging density suggests a weight as well as col. 9 line 42-45 wherein placement according to characteristics represents a weight) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

setting a temporary sequence for the plurality of files (figure 2 and col. 9 lines 1-20; 3-D model);

determining, based on the temporary sequence (figure 2), a temporary display position of a predetermined object (figures 44-47) that symbolically represents the files (col. 2 line 10) in terms of whether the weight thereof is heavy or light (i.e. density, col. 20);

displaying an object that corresponds to the plurality of files (col. 2 line 10), at the temporary display position on a screen (figure 2, 202, 203);

comparing the values of a predetermined attribute between adjacent files in the temporary sequence (embodiment 1, column 9);

updating the display position based on a comparison result obtained from said comparing (col.34 lines 9-20); and

representing visually the weight thereof by varying display contents according to said updating (as a display pattern determined based on size; col. 9 lines 8-10), wherein

the temporary display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction(figure 2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

Aoki fails to explicitly teach the temporary display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction.

Brosnan, however, teaches the temporary display position indicates that a virtual force is exerted on the object displayed on the screen at least in one direction (0073 and 0130) for simulating the display of objects on a screen as determined by their properties (see also Brosnan, 0138).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 23, Aoki teaches a file processing apparatus comprising a computer processor, said file processing apparatus including;

an attribute input unit (102) adapted to acquire a value of an attribute (col.2 line 46) for at least one file (col. 2 line 10) in order to represent the value of the attribute by using a concept of density (as thickness; col. 10, line 10, col. 11 line 24-27, col. 24 lines 16-20 and figures 8, 46, 47, and density; col. 20, line 30-45 and line 55-65) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

a position determining unit (106) operative using the computer process to set a relative display position of a predetermined object (drawing reference 208, figure 47) representing the at least one file (col. 2 line 10), the relative display position representing the value of the attribute (figure 8 and col. 10 line 6-15; i.e. size attribute) by comparing the value in terms of the density (col. 20 line 38) representing the value of the attribute by comparing the value in terms of the density (figure 44, 47, reference 208 and col. 21 lines 16-22),

a display processing unit (107) adapted to visually represent the predetermined object in the relative display position by displaying the object at the relative display position on a screen (col. 9 lines 23-25).

Aoki fails to expressly teach having a virtual buoyant force exerted on the predetermined object displayed on the screen in at least one direction. Brosnan, however, teaches having a virtual buoyant force exerted on the predetermined object displayed on the screen in at least one direction (0073, 0130) for simulating the movement of objects in a display (Brosnan, 0130 first two lines).

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 24, Aoki teaches a method of processing files, including:

acquiring values of a predetermined attribute for a plurality of intended files (102, detecting characteristics) in order to represent the values of a predetermined attribute therefor by using a concept of density (as thickness; col. 10, line 10, col. 11 line 24-27, col. 24 lines 16-20 and figures 8, 46, 47, and density; col. 20, line 30-45 and line 55-65) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

setting, for each of the plurality of files, a relative display position of a predetermined object that represents symbolically the files in terms of whether the density thereof is high or low, based on a value of the predetermined attribute (figure 44, 47, reference 208 and col. 21 lines 16-22); and

displaying the objects representing the plurality of files at the respective display positions on a screen (fig. 2), and expressing visually a comparison of the density of the objects with each other object (col. 9 lines 23-25 and figures 46-47).

Aoki fails to expressly teach a virtual buoyant force exerted on the predetermined object displayed on the screen in at least one direction. Brosnan, however, teaches virtual buoyant force exerted on the predetermined object displayed on the screen in at least one direction (0073, 0130) for simulating the movement of objects in a display.

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 25, Aoki teaches a computer-readable recording medium which stores a program executable by a computer, the program including the functions of:

acquiring values of a predetermined attribute for a plurality of intended files (102, detecting characteristics) in order to represent the values of the predetermined attribute therefor by using a concept of density (as thickness; col. 10, line 10, col. 11 line 24-27, col. 24 lines 16-20 and figures 8, 46, 47, and density; col. 20, line 30-45 and line 55-65) said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating (col. 11 lines 18-20 and fig. 15 which disclose date of creation and format);

setting, for each of the plurality of files, a relative display position of a predetermined object representing symbolically the files in terms of whether the density thereof is high or low, based on the values of the predetermined attribute (figure 44, 47, reference 208 and col. 21 lines 16-22); and

displaying on a screen the objects of the plurality of files at the respective display positions, and expressing visually comparison of the density of the objects with each other object (col. 9 lines 23-25 and figures 46-47)

the display position (fig. 2; e.g. the z-axis) indicates whether the object (figure 2; e.g. data models 203 representing files) is comparatively heavy or light (figure 2 and col. 2 line 40-47; e.g. the depth on the z axis depicting an attribute of each item within the space in comparison with the other items) with a difference in the display position in the direction(figure 2; e.g. the depth/shallowness of the data object with respect to the z axis indicates a display position).

Aoki fails to expressly teach a virtual buoyant force exerted on the predetermined object displayed on the screen in at least one direction.

Brosnan, however, teaches virtual buoyant force exerted on the predetermined object displayed on the screen in at least one direction (0073, 0130) for simulating the movement of objects in a display.

In the same field of endeavor, (i.e. displaying objects according to their attributes in a 3-D space), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16).

With respect to claim 26, Aoki teaches the file processing apparatus according to Claim 1, wherein the attribute includes a data size (col. 9 line 5-8).

With respect to claim 27, Aoki teaches the file processing apparatus according to Claim 1, wherein the attribute includes at least one of a preparation date, a date of file updating, an importance, a type of file, a number of files contained in a folder, a the number of sub-folders contained in the folder, a count of file updating, a frequency of file updating (col. 9 line 19; i.e. the date of creation represents at least the preparation date).

Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki and Brosnan as applied to claims 1 and 10 above and further in view of Vaananen et al. (Vaananen hereinafter) U.S. Patent Application 2002/0175896 A1.

With respect to claim 2 and similar claim 11, Aoki and Brosnan fail to teach a file processing apparatus according further including an inclination detector which detects inclination of a predetermined region in the file processing apparatus operated by a user, wherein according to the inclination detected by said inclination detector said position determining unit varies the relative display position and the direction in which the force is exerted.

Vaananen, however, teaches this limitation as element 50 of figures 2 and 5 and paragraph 0078. Therein an accelerator sensor is disclosed to measure tilting movements.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teachings of Vaananen would have provided Aoki-Brosnan's system with the ability to vary a relative display position to obtain an easier to use user interface. Vaananen suggests in paragraph 0009 a need for a less "slow and awkward" method of data browsing. Aoki suggests in column 2, lines 2-4 a need to be able to access and manage data in a straightforward manner.

Claims 7, 8, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Aoki and Brosnan as applied to claims 1, 3-6, 9, 10, 12-14, 16, and 20-25 above further in view of Adler et al ("Adler" hereinafter) U.S. Patent 6,340,957.

With respect to claim 7 and similar claims 8 and 15, Aoki and Brosnan teach a file processing apparatus as applied to claims 1, 3-6, 9, 10, 12-14, 6, and 20-25 above.

Aoki and Brosnan fail to teach a file processing apparatus further including a vibration detector which detects a swaying motion at a predetermined region of the file processing apparatus operated by a user, wherein said comparison processing unit performs a comparison processing when the motion is detected, and said position determining unit updates the relative display position according to the result obtained from said comparison processing unit.

Adler, however, teaches these limitations from at least (col. 15 lines 15-22). Therein displayed data is manipulated according to vibration for accessing and managing data in a straightforward manner.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because this feature of Adler would have satisfied Aoki-Brosnan's need for accessing and managing data in a straightforward manner which is needed by Aoki (column 2 line 12-17 and column 12 lines 15-23). Further, data would be displayed accordingly in response to detecting a vibration for the benefit of allowing the data to be readily visible as is needed by Aoki.

Response to Arguments

Objections to the Specification

In light of Applicant's remarks (p. 12-13), the specification objection is withdrawn. As best interpreted, the recording medium in claims 20-22 and 25 reciting the *storing* of a program executable by a computer recites a statutory medium. As such, because the recording medium

stores a program and is not positively supported to include nonstatutory embodiments (i.e. propagated signals, carrier waves, etc.), it cannot be reasonably construed as nonstatutory.

Claim Rejections – 35 U.S.C. 103

Applicant's remarks filed in the reply dated 5/12/2009 ('reply') have been fully considered but they are not persuasive.

On page 14 of the reply, Applicant argues that the cited prior art fails to teach "setting a relative display position of a predetermined object that symbolically represents the files in terms of whether the weight thereof is heavy or light based on a value of a predetermined attribute for an intended file." Examiner respectfully disagrees and maintains that Aoki and Brosnan teach at least this feature.

Specifically, Examiner maintains that Aoki teaches the aforementioned limitation. For example, figure 27 shows objects representing documents and, in this figure, the date controls the position of the objects on the Z axis (see further, col. 9 line 30-36 and col. 16 line 36-40). With this, the Examiner submits that an attribute of a file that controls the display represents a "weight". In other words, because the attribute (in this case the "date") controls the display of an object in relation to other dated objects, that attribute represents a "weight" of that object. Aoki further describes light and heavy by adjusting the data models accordingly. Furthermore, as other embodiments may include the size of a file, and the display position is adjusted accordingly (e.g. Aoki, col. 9 line 8), Aoki again describes representing the weight of an object in terms of whether it is heavy or light.

Applicant further argues on page 15 of the reply that nothing whatsoever regarding attribute weight is disclosed in the sections (i.e. fig. 2, col. 2 lines 40-47; col. 8 lines 46-50 and fig. 1 ref. 108) and furthermore argues (page 16 of the reply) that [Applicant] cannot discern any reasonable interpretation, where, "weight" as presently claimed can be characterized by a virtual position of an object relative to other objects.

In further explanation of Examiner's position, the recitation of "weight" can be characterized as an attribute of an object and further "heavy" and "light" can be characterized as variations or a visual difference of position of that attribute shown on a display. In the example of Aoki (e.g. fig. 2), a date (i.e. weight) of an object signifies its placement in comparison to the Z axis in the 3-D space. Furthermore, Examiner submits that the dates (e.g. "weights") of each object vary (e.g. "heavy" or "light") by at least disclosing positions of objects in a 3-D space according to their dates. Examiner submits that the claims, with lack of detail as to *how* an attribute corresponds to and indicates "heavy" or "light" as a weight, may fall under the interpretation that a position of objects indicated by their characteristics conveys weight. As presently interpreted, "heavy" or "light" are descriptive terms to indicate a position and thus, because Aoki teaches positions of objects representing files according to their characteristics (i.e. attributes), Examiner maintains the Aoki reference.

Examiner also submits that, presently, the argued limitation recites only a description of weight in terms of positioning. Likewise, Aoki teaches a position according to "weight" by illustrating position of older files compared to newer ones (e.g. Aoki, figure 2 and col. 16 lines 36-40). Similar to Applicant's figure 7 which shows an older (i.e. "heavier") object representing a file (e.g. reference 106) that is positioned relatively to a newer ("lighter") object (108)

according to date, Aoki teaches positioning older and newer objects (that represent files) further or closer away on a Z axis according to a date characteristic. Thus the position of objects representing files in Aoki are accorded a "weight" (i.e. "heavy" or "light") as determined by their attribute. As such, the term "weight" in the claims can be interpreted from Aoki as the display of objects representing files according to their characteristics. Moreover, the weight in terms of "heavy" or "light" can be interpreted from Aoki as the differing display positions (e.g. old or new) upon the Z axis.

Applicant further argues on page 16 of the reply that the last Office Action contradicts statements by stating that Aoki discloses a virtual force and then states that Aoki fails to teach such a force. Examiner respectfully submits that this point has been clarified in the Office Action above and further submits that although Aoki discloses a display position in a direction (e.g. a Z axis, fig. 2), Aoki does not clearly present a display position in a direction indicated by a "virtual force"; however, Brosnan is sought to remedy this deficiency.

Applicant furthermore argues that there is no apparent reason to combine the teachings of Brosnan with Aoki in the manner suggested. Examiner respectfully disagrees.

In response to Applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Brosnan gives the **teaching** of a virtual force (e.g. 0073 and 0130)), a **suggestion** to combine (i.e. same field of endeavor - displaying objects according to their attributes in a 3-D space and further, the need of a virtual force shown by Aoki, col. 2 lines 10-16) and a **motivation** (because the virtual forces, as provided by Brosnan, would have given Aoki's system better visualization of data items represented on a screen for the benefit of a user to better understand the placement of data relative to other data and furthermore making it easier for a user to manage that data (need shown by Aoki at col. 2 line 10-16). Further, the virtual force used in Brosnan would have enabled a user of Aoki to understand the characteristics of each data item in a relationship among the data).

Applicant goes on to argue (page 17 of the reply) that there is no teaching in Brosnan relating to a static display position based on, for instance, a file size and thus there is no reason to combine. Examiner substantially agrees that Brosnan does not teach a display based on file size; however, Aoki teaches this aspect and further submits that Brosnan and Aoki both teach placement of objects based on their properties/characteristics – thus supporting a basis for combination. Applicant also argues that both references relate to different fields of endeavor. Examiner respectfully disagrees as at least both references are related to data presentation within a 3-D space and further, presenting objects accordingly to attributes, properties, and characteristics.

Additionally, Applicant argues that the display in Brosnan does not relate to displaying objects subject to a virtual force based on a value of an attribute of a file. Examiner submits that

the combination of Aoki and Brosnan teach this feature with Aoki displaying objects representing files in a space according to a value of their attributes (e.g. date) while Brosnan subjects an object to a virtual force based on its properties (e.g. 0129-0130).

In response to arguments of the previous action, Applicant states that the Examiner can point to no reasonable explanation how Brosnan's physical object modeling bears any relation to Aoki's document management system let alone how its application would provide "better visualization..." Examiner respectfully submits that Brosnan does bear relation in that they are seen in the same field of endeavor (i.e. 3-D space modeling of objects according to attributes). Further, Examiner submits that Brosnan's teachings would have helped a user better understand the placement of data by showing how the data arrived at its position. For example, a "virtual force" can merely be seen as a force holding a data object in a current position. In this example, an older data object is held at a last position on a Z axis while a newer data object is held in front (e.g. fig. 2, Aoki). Nonetheless, Aoki shows forces can be applied when they disclose their invention may indicate animations of the objects (e.g. col. 13 lines 8-9, Aoki). As such, Examiner submits that the teachings of Brosnan would not denigrate any advantages of Aoki; rather, the teachings would have provided a user a better explanation of attribute values for the benefit of visualizing data objects representing files in a 3-D space.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-Th 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/ROBERT TIMBLIN/

Examiner, Art Unit 2167